

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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PCT

WRITTEN OPINION

(PCT Rule 66)

22 Dec 04 (1)

Date of mailing
(day/month/year)

22.10.2004

Applicant's or agent's file reference
WO 21.1099

REPLY DUE

within 2 month(s)
from the above date of mailing

International application No.
PCT/EP 03/12205

International filing date (day/month/year)
27.10.2003

Priority date (day/month/year)
13.12.2002

International Patent Classification (IPC) or both national classification and IPC
G01V3/20

Applicant
SERVICES PETROLIERS SCHLUMBERGER

1. This written opinion is the **second** drawn up by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I Basis of the opinion
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

3. The applicant is hereby **invited to reply** to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also: For an additional opportunity to submit amendments, see Rule 66.4. For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis. For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 13.04.2005

Name and mailing address of the international preliminary examining authority:



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I. Basis of the opinion

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"*):

Description, Pages

1-22 as originally filed

Claims, Numbers

1-22 as originally filed

Drawings, Sheets

18-8/8 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

5. This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

6. Additional observations, if necessary:

WRITTEN OPINION

International application No.

PCT/EP 03/12205

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N) Claims 2, 17, 21, 22

Inventive step (IS) **Claims** 3-5

Industrial applicability (IA) Claims

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 Reference is made to the following document:

D1: US-A-4 517 835 (KERZNER MARK G) 21 May 1985 (1985-05-21)
D2: SZENDRO D: "Automatic relative depth matching of borehole information. I. Theoretical review" GEOPHYSICAL TRANSACTIONS, vol. 32, no. 4, April 1987 (1987-04), pages 333-353, XP008019187 HUNGARY ISSN: 0016-7177

2 The application does not meet the requirements of Article 6 PCT, because claim 1 is not clear.

Claim 1 is not clear as it is neither specified in this claim how the data sets are transformed into three-dimensional images (step (a)), nor how two-dimensional curves are derived from the three-dimensional images (step (b)), nor how an offset is derived from the two-dimensional curves (step (c)).

3 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 2 is not new in the sense of Article 33(2) PCT.

The document D1 discloses (the references in parentheses applying to this document) the matching of a plurality of data sets (23A, 25A) obtained from sensors (23-26), the data sets being indicative of dip in the vicinity of the borehole (column 8, lines 12-16), for each data set individual signals are combined to create an averaged signal (23B, 25B) (column 8, lines 50-66). An offset is calculated and the curves are depth matched (column 11, lines 30-64).

The subject-matter of claim 2 is therefore not new.

4 Dependent claims 3-5, 17, 21, and 22 do not contain any features which, in combination with the features of claim 2, meet the requirements of the PCT in respect of novelty and/or inventive step, see documents D1 and D2 and the corresponding passages cited in the search report.